

A B S T R A C T

A METHOD OF DETERMINING A SPECTRAL ROUTE FOR A GIVEN CONNECTION IN AN OPTICAL TELECOMMUNICATIONS NETWORK

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In order to determine a spectral route for a given connection in an optical telecommunications network (T) between a starting node (ON1) and a destination node (ON6) of the network, the method consists in: using a conventional routing method to determine one or more candidate spatial routes (Route 1, Route 2) connecting the starting node (ON1) to the destination node (ON6), each candidate spatial route comprising a sequence of route segments, each segment connecting two nodes of the network directly and being adapted to support a plurality of spectral routes, sending a route set-up request message from the starting node (ON1) to the destination node (ON6), collecting parameter values in the message as it passes through each node along the candidate spatial route, in particular transparency parameter values characterizing the spectral dimension (availability of wavelengths, physical parameters varying as a function of the occupation of the links), and, finally, using an optimization method to process all the parameter values collected in this way to determine a spectral route leading to the selection of a spatial route from among the candidate spatial routes if there are more than one candidate spatial routes.

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